

PATENT
Serial No. 10/511,804
Amendment in Reply to Office Action mailed on May 18, 2006

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A luminescent screen comprising particles of luminescent material embedded in an inorganic material, ~~characterized in that~~ wherein the inorganic material comprises aluminium phosphate, and wherein a diameter of the particles of luminescent material is greater than a diameter of inorganic particles of the aluminium phosphate.

2. (Currently Amended) ~~A~~ The luminescent screen as claimed in claim 1, wherein the inorganic material further comprises particles of an inorganic oxide.

3. (Currently Amended) ~~A~~ The luminescent screen as claimed in claim 2, wherein the inorganic oxide comprises a compound chosen from the group formed by aluminium oxide and silicon oxide.

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4. (Currently Amended) A discharge lamp equipped with a the luminescent screen as claimed in claim 1.

5. (Currently Amended) A The discharge lamp as claimed in claim 4, wherein the discharge lamp comprises a lamp vessel that is ~~transparent~~ transparent for visible light and the luminescent ~~layer~~ screen is deposited on part of an inner wall or part of an outer wall of the lamp vessel.

6. (Currently Amended) A The discharge lamp as claimed in claim 5, wherein the luminescent screen is covered by a top layer.

7. (Currently Amended) A The discharge lamp as claimed in claim 6, wherein the top layer comprises a compound chosen from the group formed by yttrium ~~oxide~~, oxide and yttrium-strontium-borate ~~and aluminium oxide~~.

8. (Currently Amended) A The discharge lamp as claimed in claim 4, wherein the discharge lamp is a fluorescent lamp.

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9.(New) The luminescent screen of claim 1, wherein the diameter of the particles of the luminescent material is greater than the diameter of inorganic particles of the aluminium phosphate by at least an order of magnitude of ten times.

10.(New) The luminescent screen of claim 1, wherein inorganic particles of the aluminium phosphate fill pores between the particles of the luminescent material.

11.(New) A luminescent screen comprising:
luminescent material having luminescent particles; and
inorganic material having inorganic particles including aluminium phosphate;

wherein the inorganic particles are smaller than the luminescent particles so that the inorganic particles fill pores between the luminescent particles.

12.(New) The luminescent screen of claim 11, wherein a diameter of the luminescent particles is greater than a diameter of

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inorganic particles by at least an order of magnitude of ten times.

13.(New) The luminescent screen of claim 11, wherein the inorganic material further includes at least one of aluminium oxide and silicon oxide.

14.(New) A discharge lamp comprising:
a discharge vessel; and
a luminescent screen deposited on part of an inner wall or part of an outer wall of the discharge vessel;
the luminescent screen comprising:
luminescent material having luminescent particles; and
inorganic material having inorganic particles including aluminium phosphate;

wherein the inorganic particles are smaller than the luminescent particles so that the inorganic particles fill pores between the luminescent particles.

15.(New) The discharge lamp of claim 14, wherein a diameter of the luminescent particles is greater than a diameter of

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inorganic particles by at least an order of magnitude of ten times.

16.(New) The discharge lamp of claim 14, wherein the inorganic material further includes at least one of aluminium oxide and silicon oxide.

17.(New) The discharge lamp of claim 14, further comprising a top layer formed over the luminescent screen.

18.(New) The discharge lamp of claim 14, wherein the top layer comprises a compound chosen from the group formed by yttrium oxide and yttrium-strontium-borate.

19.(New) A method of forming a luminescent screen on a lamp wall comprising the acts of:

mixing luminescent particles with aluminium phosphate particles to form a slurry;

applying the slurry to the lamp wall; and

drying the lamp wall, wherein the aluminium phosphate particles are smaller than the luminescent particles so that the

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aluminium phosphate particles fill pores between the luminescent particles.

20. (New) The method of claim 19, wherein the mixing act further includes mixing aluminium oxide particles in the slurry, and wherein the aluminium phosphate includes mono aluminium phosphate.